State of Washington
DEPARTMENT OF FISH AND WILDLIFE

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U.S. Army Corps of Engineers
Walla Walla District
Attention: Lower Snake River Study
201 North Third Avenue
Walla Walla, Washington 99362-1876

To Whom It May Concern:

The Washington Department of Fish and Wildlife (WDFW) has reviewed the Draft Lower Snake River Juvenile Salmon Migration Feasibility Report/Environmental Impact Statement (FR/DEIS). The Corps of Engineers has made a considerable effort in coordinating such an extensive study and preparing the report. We appreciate the opportunity to provide comments on the biological issue of how to reduce juvenile salmon migration mortalities in the lower Snake River. At the same time, it is unfortunate that the lengthy time frame (beginning in 1995) necessary to prepare the FR/DEIS prevents the opportunity to include in the alternatives more recent insights created in regional discussions. As a result, the alternatives in this FR/DEIS now appear to offer only narrow and simplistic solutions to very complex problems. Both the Federal Caucus "All-H" process and the renewal of the Northwest Power Planning Council's (NPPC) Fish and Wildlife Program offer regional decision makers ranges of alternatives that better reflect the inter-relatedness of the "All-H" mortality factors and the array of options for reducing those mortalities. Accordingly, we expect the results of those processes will provide more meaningful guidance to recover Snake River salmon than the decision made as part of this EIS process.

The alternatives presented in the DEIS are options to substantially reduce the mortalities due to the hydro system currently allowed by NMFS (1995 FCRPS Incidental Take Permit). For juvenile Snake River spring/summer chinook, the allowable mortalities passing the four lower Snake dams and the four Columbia mainstem dams range from 24% to 86%, and for adults the allowable mortalities are 21%. The same allowable mortalities for Snake River fall chinook are 62% to 100% for juveniles, and 39% for adults. Reduction of those passage mortalities is only one of many aspects of recovering Snake River salmon populations. Yet the high juvenile dam passage mortality, when coupled with the mortality suffered by the upstream migrating adults, makes salmon recovery very problematic.

For the purposes of public record comment on the FR/DEIS, our biologically-based review of the four Alternatives in the FR/DEIS is focused on the configuration and operation of the four lower Snake River dams in relation to reduction of juvenile salmon migration mortalities. We expect to address the broader issue of recovery options for Snake River stocks and other listed stocks in the upper, middle and lower Columbia River in the regional discussions that are central to the recent renewal of the NPPC's Fish and Wildlife Program. In addition, consideration of the "All H" paper, as well as the long-term Biological Opinion for the operation of the Federal Columbia River power system (FCRPS) is essential.

WDFW supports the implementation of coordinated measures in the Snake River that will result in the reasonable opportunity to recover ESA listed stocks and that will promote healthy, diverse fish and wildlife populations. This is consistent with our agency's legislative mandate and the policies of this state's Fish and Wildlife Commission. In that context, WDFW considers recovery to be when a stock has rebuilt to levels that allow sustainable harvest and other uses, not just to the point where recovery is precluded under the strictest constructions of the Endangered Species Act.

The goal of Washington's Statewide Strategy to Recover Salmon (1999) is to:

> **"Restore salmon, steelhead and trout populations to healthy and harvestable levels and improve habitats on which fish rely."**

Our criteria for judging the efficacy of the proposed alternatives is whether the reduction in juvenile mortalities offers a reasonable portion of the overall "probability of recovery" as viewed from both a scientific and a pragmatic perspective. This is the same standard that we use for judging all our actions relative to salmon recovery. For example, the harvest restrictions that have consistently been implemented for over two decades for upper Columbia and Snake spring and summer chinook and for a decade for Snake River fall chinook, have been substantial. The scientific evidence clearly demonstrated that harvest mortality needed to be reduced to avoid extinction and also to contribute to recovery. However, since the same scientific information also indicated that a complete reduction in harvest mortality alone would not be sufficient to recover the stocks, a balanced approach between reduction of harvest mortality on listed stocks and continued harvest of abundant hatchery fish is warranted.

In specific regard to the alternatives in the FR/DEIS dealing with juvenile salmon migration mortalities in the lower Snake River, we offer the following biological assessments.

Alternative 1, Existing Conditions, doesn't merit further consideration as a recovery measure. All modeling efforts to date indicate that salmon numbers will continue to fail to meet recovery objectives under existing operational conditions for the dams as set forth in the 1995 Biological Opinion and the 1998 and 1999 Supplemental Biological Opinions. These modeling efforts

include the Process for Analyzing and Testing Hypothesis (PATH) conducted by state, tribal and USFWS staff; Cumulative Risk Initiative (CRI) conducted by NMFS; and Ecosystem Diagnostics and Treatment (EDT) conducted by NPPC. These same analyses have shown that there is no biological reason to consider continuing these measures alone for the purposes of recovering the listed Snake River stocks since they allow the unacceptably high dam passage-related juvenile salmon mortality rates described in a previous paragraph. This Alternative closely approximates continued delay in deciding on a course of action. The risks presented in the FR/DEIS for this alternative provide clear evidence that it could not sufficiently reduce juvenile salmon mortalities.

Alternative 2, Maximized Transportation, does not appear to provide the necessary level of improvement in juvenile migration survival. A significant percentage of Snake River stocks are already being transported, and yet adult salmon returns continue to decline. Thus, slight increases in numbers of juvenile salmon transported will not be sufficient for consideration as the principal measure in a recovery plan. If coupled with major system improvements not considered under Alternative 3, however, this alternative may help reduce mortalities. Certainly, transportation has been valuable as a means of avoiding extinction so far with the dams in place, but it cannot result in recovery without a dramatic improvement in the operational performance of the dams, an improvement that currently remains unattainable even after more than 20 years of research and refinement.

Alternative 3, Major System Improvements, is too narrowly defined in this document. As crafted, it primarily relies on unproven technology for surface collector systems, which theoretically should improve conditions for juvenile migrants. If such technology can be developed, it is still problematic if it will provide the necessary level of improvement in support of juvenile migrants. Further, if no other actions are taken while it is being researched and developed, valuable time is being lost. However, if coupled with other early action measures, this alternative may contribute in the near-term to the reduction of juvenile salmon migration mortalities.

Alternative 4, Dam Breaching, is identified here as providing the clearest benefit to fish but suffers from practibility and results from only evaluating the four narrowly-drawn alternatives presented in the FR/DEIS for reducing juvenile migration mortalities. This alternative only provides for a long-term focus (decades) for addressing juvenile salmon migration mortalities. Biologically, over the long-term, it can provide for a reduction in not only juvenile but also adult migration mortalities for the listed Snake River salmon and steelhead. In addition, it provides a number of water quality, resident fish and wildlife benefits that Alternatives 2 and 3 do not. However, WDFW has strong reservations with this alternative given current regional discussions of Snake River salmon recovery that include potentially viable alternatives that are not considered in the current FR/DEIS. We are prepared to consider other alternatives that provide

strong probabilities of reducing juvenile migration mortalities that are similar to those provided by Alternative 4. Consideration of new alternatives that have not, as of yet, been subjected to the same level of scientific scrutiny that the narrow FR/DEIS alternatives have received, will have to commence immediately to be effective in reducing juvenile migration mortalities. Ironically, even the assessment of Alternative 4 as providing the clearest benefit to fish of the four alternatives also represents a choice to delay. The most optimistic projections are that the process of breaching the four lower Snake dams would take decades before benefits for juvenile fish survival would materialize. During that time, further erosion of listed stocks, if not extinction, may occur.

Regardless of the outcome of the alternatives in this FR/DEIS, we have reached the conclusion that we must undertake action soon in order to prevent further erosion and possible extinction of the listed stocks in the Snake River drainage. Our conclusion is reinforced by our review of the long history of delay and avoidance in addressing the needs of fish in the construction and operation of the FCRPS.

Following passage of the 1945 Rivers and Harbors Act, which authorized 10 additional Federal dams in the Columbia Basin, the U. S. Fish and Wildlife Service and the Bureau of Indian Affairs proposed a 10-year moratorium in beginning of construction of these new dams in order to study the cumulative effects these 10 additional projects might have on anadromous fish. Bowing to political pressure in early 1947, the USFWS and BIA conceded that development was inevitable and should proceed without further delay even if it meant losing some of the salmon stocks in the Columbia. The last Federal hydropower project was completed in 1975 when Lower Granite Dam went into service. In 1978, consideration was given to listing some Snake River salmon stocks under the Endangered Species Act, but this was set aside in 1980 when Congress passed the Northwest Electrical Power Planning and Conservation Act, which set up the NPPC. It was hoped that the Council would make significant changes in how the FCRPS operated and thereby rescue these stocks. The Council passed its first version of its Fish and Wildlife Program in 1982. In 1990, the first petition for listing of Snake River sockeye was filed, followed by a similar petition for Snake River chinook in 1991. Listings of these fish followed in 1991 and 1992, respectively.

In 1992, the NMFS issued its first Biological Opinion on the FCRPS, bestowing a "No Jeopardy" ruling on measures that represented little significant change from *status quo* operations. A similar opinion was issued in 1993, followed by a 5-year opinion in 1994. Idaho Fish and Game Department and others sued NMFS over the adequacy of the 1993 Opinion and prevailed in court when Federal District Court Judge Malcom Marsh ruled that NMFS had been "arbitrary and capricious" in its use of available information on the effects of the FCRPS and that the situation cried out for significant changes in the way the FCRPS was configured and

operated. NMFS agreed that the 1994-98 Opinion was also inadequate and consulted with the fishery agencies and tribes to develop a new 5-year opinion in 1995 that was not intended as a recovery plan, but an interim opinion to allow further study to address the critical uncertainties regarding certain issues. That long history culminated in a decision point in 1999 on the long-term configuration and operation of the FCRPS. However, the WDFW feels this FR/DEIS does not adequately address the long-term operation of the FCRPS.

Thus, it becomes imperative that the Federal Agencies implement the following actions to benefit listed Snake River salmon and steelhead immediately, while the regional decision-making process continues. Most, if not all, of these actions should be included in any systemwide response to salmon recovery. It would be imprudent to delay these actions further.

1. Continue the flow augmentation measures contained in the 1995 and 1998 Biological Opinions. Implement additional measures for flow augmentation in the tributaries and mainstem, including additional measures to protect chum and lower river fall chinook below Bonneville.
2. Continue the controlled spill program to improve survival of in-river juvenile migrants.
3. Implement "fast track" dissolved gas abatement measures, especially at Grand Coulee, Chief Joseph and Bonneville. Continue efforts to meet state water quality standards for dissolved gas and temperature throughout the system.
4. Reduce power peaking and load following to reduce flow fluctuations during critical periods in juvenile incubation, rearing and migration and adult migration and spawning.
5. Implement energy conservation programs to reduce regional power needs.
6. Implement a comprehensive estuary habitat improvement program, as well as a critical fish monitoring and evaluation program to ensure that the habitat improvement goals are being met. This should at least satisfy the commitments made during the regional discussions of the navigation channel deepening project. The deepening EIS project has highlighted the need for improved conditions in the estuary and lower Columbia River as an essential component of salmon recovery. These projects and the subsequent commitments should be implemented as soon as possible.
7. Eliminate trucking of transported smolts. Provide additional barges to reduce holding of smolts during peak passage periods.
8. Conduct a realistic study of flood control operations in the basin. Look at ways to implement revised flood control rule curves that will reduce flood control drafts and provide higher spring and summer flows.
9. Fully fund fish passage facility operation and maintenance programs.
10. Implement measures to control predation on smolts and adults in the lower river by both birds and marine mammals.
11. Fully fund state and tribal enforcement programs on the Columbia, to ensure that harvest restrictions and habitat measures are meeting their intent.

12. Provide funding to operating entities for implementation of the recommendations contained in the *Artificial Production Review* (NPPC 1999).
13. Provide full funding of enhancement and monitoring projects for salmon recovery that have state and tribal agreement, and have received favorable review by independent science panels.
14. Assist the states and tribes with the development of selective fisheries technologies.
15. Support mass marking program for chinook and coho, and provide full funding for marking of fish from federal hatcheries and within the Mitchell Act budget.
16. Develop a realistic recovery plan encompassing all of the "All-H's" by 2003.

To reiterate, given the narrow range of alternatives to reduce juvenile salmon mortalities under consideration in the FR/DEIS, we have reached the following biologically-based assessment. Unfortunately, Alternatives 2 and 3 in the FR/DEIS only offered very limited technological approaches that alone do not offer a reliable certainty to reduce juvenile salmon mortalities. Alternative 4 (considered equivalent to Natural River Drawdown) appears to offer the highest probability, over the long-term, of the four alternatives for reducing juvenile salmon mortalities. However, we believe it is not an adequate alternative because of the length of time necessary to achieve its benefits, and that it could never be a "stand alone" measure to actually achieve recovery of listed Snake River stocks. The FR/DEIS excludes the full scope of alternatives that may offer viable operational alternatives to dam breaching to reduce juvenile salmon mortalities as part of a broader implementation plan to recover Snake River salmon.

In contrast, other options, not considered in this narrow FR/DEIS, but now being considered under new regional decision making approaches by the NMFS and NPPC, may offer viable options to Alternative 4 to reduce juvenile salmon migration mortalities in the near-term. In addition, these regional approaches offer the best hope of crafting pragmatic, balanced and coordinated actions (rather than the narrow alternatives under the FR/DEIS) necessary to recover listed salmon stocks, if they are immediately deliberated. If so, WDFW will support the comprehensive decision making process, over the alternatives in the DEIS, that would bring together the full scope of actions (e.g. aggressive operational changes to the Snake River dams) necessary in "All-H's" to actually recover listed salmon.

Thank you for the opportunity to comment on this important issue.

Sincerely,

Jeff P. Koenings, Ph.D.
Director